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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,787	06/13/2006	Masato Kaneda	Q79148	5976

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EXAMINER	
EOFF, ANCA	
ART UNIT	PAPER NUMBER
1795	
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05/01/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/582,787	KANEDA ET AL.	
	Examiner	Art Unit	
	ANCA EOFF	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04/18/2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) *5 and 7-9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6 and 10-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *06/13/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The foreign priority document JP 2003-418112, filed on December 16, 2003 was received and acknowledged. However, in order to benefit of the earlier filing date, a certified English translation is required.

Election/Restrictions

2. In response to the election requirement set forth in the previous Office Action, the applicant has elected species B, claims 1-4, 6 and 10-12. Claims 5 and 7-9 are withdrawn from consideration as being directed to non-elected species.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraph of 35 U.S.C. 102 that forms the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Wyatt et al. (US Patent 6,162,593).

With regard to claims 1-2, Wyatt et al. disclose printing plate developing solutions comprising between 20% by weight and 80% by weight of diisopropylbenzene (Examples 3-5 in table 1, column 9, lines 20-50).

In the table in column 5, lines 37-47, Wyatt et al. specifically disclose that the diisoproylbenzene may be 1,4-diisopropybenzene, 1,3-diisopropylbenzene and mixed diisopropylbenzenes, with a boiling point of 210°C.

With regard to claim 3, Wyatt et al. disclose a developer solvent comprising 20% diisopropylbenzene, 20% benzyl alcohol and 60% by weight of isoparaffinic hydrocarbon (Example 4 in table 1, column 9), said developer being used for a flexographic printing plate (Example 9 in column 10, lines 52-57).

This developer is equivalent to the photosensitive remover of the instant application comprising 20% by mass of aromatic hydrocarbon with 9 ore more carbon atoms and 80% by mass of one or more solvents other than aprotic polar solvents, when the remover/developer consists essentially of the aromatic hydrocarbon with 9 ore more carbon atoms and one or more solvents other than aprotic polar solvents.

Claims 11-12 refer only to the intended use of the photosensitive composition remover, which adds no patentable weight to the composition claim. Therefore, the printing plate developing solution of Wyatt et al. meets the limitation of these claims.

5. Claims 1-4 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Blum et al. (US Patent 5,350,663).

With regard to claims 1-4 and 11-12, Blum et al. disclose a solvent composition comprising 77.77% by weight of N-methyl-pyrroldione and 22.22% by weight of Solvesso 100 (column 9, lines 56-58).

Solvesso 100 is disclosed on page 11 of the specification of the instant application as a C_9 alkylbenzene-based mixed solvent, with a boiling point 164-176°C.

The solvent composition consisting of 77.77% by weight of N-methyl-pyrroldione and 22.22% by weight of Solvesso 100 (column 9, lines 56-58) is equivalent to the remover of claims 3-4 which comprises 20-80% by mass of one or more aromatic hydrocarbons having 9 or more carbon atoms and 20-80% by mass of an aprotic polar solvent, when the remover consists essentially of one or more aromatic hydrocarbons having having 9 or more carbon atoms and an aprotic polar solvent.

N-methyl pyrrolidone is equivalent to the N-methyl-2-pyrrolidone disclosed on page 12 of the instant application as aprotic polar solvent.

Since the solvent composition of Blum et al. comprises the same components as the photosensitive composition remover of the instant application, it could be used as such.

6. Claims 1-2 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Sato et al. (US Patent 5,185,235)

With regard to claims 1-2 , Sato et al. disclose a remover solution for photoresist composition comprising 40% by weight of Swasol 1500 (column 6, lines 40-42) and define Swasol as a mixture of tri- and tetramethyl benzenes (column 3, lines 24-27).

Swasol 1500 is disclosed on page 11 of the specification of the instant application as a C9 alkylbenzene-based solvent mix with a boiling point of 180.5°C-208.5°C.

Claims 11-12 refer only to the intended use of the photosensitive composition remover, which adds no patentable weight to the composition claim. Therefore, the remover solution of Sato et al. meets the limitation of these claims.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US Patent 5,185,235) in view of Nishioka et al. (US Patent 4,845,008).

With regard to claims 6 and 10, Sato et al. disclose a remover solution for photoresist composition comprising 35-80% by weight of an alcoholic solvent (A) amd 10-40% by weight of an organic solvent (B) (abstract).

The component (A) may be alcohols (methyl alcohol, ethyl alcohol, propyl alcohol, 3-methyl-3-methoxybutyl alcohol), or glycol ethers, such as propylene glycol monomethyl ether .These solvents may be used individually or in combination (column 2, lines 52-62).

The component (B) may be an aromatic solvent, such as amyl benzene, naphthalene, diethyl benzene (aromatic hydrocarbon with 10 carbon atoms having a boiling point of 184°C), cymene (aromatic hydrocarbon with 10 carbon atoms having a boiling point of 177°C), Swasol which is a mixture of tri- and tetramethylbenzenes. These aromatic solvents may be used individually or in combination (column 3, lines 32).

While Sato et al. do not specifically disclose a remover as required by claim 6 of the instant application, it would have been obvious to one of ordinary skill in the art at the time of the invention to use as component (B) an aromatic solvent, such as amyl benzene, naphthalene, diethyl benzene (aromatic hydrocarbon with 10 carbon atoms having a boiling point of 184°C), cymene (aromatic hydrocarbon with 10 carbon atoms having a boiling point of 177°C) and a mixture of solvents comprising propylene glycol monomethyl ether as component (A), as disclosed in column 2, lines 52-62 and column 3, lines 19-32).

The component (B) may be in an amount of 10-40% by weight and the component (A) may be in an amount 35-80% by weight (abstract) so the ranges of claims 6 are encompassed.

A remover comprising 10-40% by weight of the component (B), represented by aromatic solvents and 35-80% by weight of the component (A) which may be a mixture of propylene glycol monomethyl ether and alcohols or glycol ethers is equivalent to the photosensitive composition remover of claim 6.

However, Sato et al. do not specifically disclose a mixture of propylene glycol monomethyl ether and alcohols or glycol ethers as component (A) and do

not specifically disclose the amount of propylene glycol monomethyl ether in such a mixture.

Nishioka et al. disclose a solvent mixture used for a light-sensitive composition, said mixture dissolving acrylic resins (column 9, lines 8-40). The solvent mixture comprises:

- solvents of group (i) having a boiling point between 40°C and 100°C, such as methyl alcohol, ethyl alcohol, propyl alcohol and methyl ethyl ketone (column 10, lines 46-49);

- solvents of group (ii) having a boiling point between 100°C and 140°C, such as propylene glycol monomethyl ether (column 10, line-column 11, line 18);

- solvents of group (iii) having a boiling point between 140°C and 210°C (column 11, lines 19-20).

Specific examples show solvent mixtures comprising solvents of group (i) and propylene glycol monomethyl ether of group (ii) mixed in a ratio of about 1: 2. (Example 5 in table 1, column 15-16 and 17-18).

Since the remover solution of Sato et al. is used for dissolving and removing acrylic resins (column 1, lines 9-13 and lines 63-65), it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Nishioka et al. and use a mixture comprising alcohols (solvents of group (i)) and propylene glycol monomethyl ether in a ratio of 1:2 as component (A) for the remover of Sato et al.

The remover of Sato modified by Nishioka comprising 10-40% component (B), represented by aromatic hydrocarbons and 35-80% component A, which is a

1 : 2 mixture of alcohols (methyl alcohol, ethyl alcohol, propyl alcohol, as disclosed by Sato et al. in column 2, lines 53-54) and propylene glycol methyl ether is equivalent to the remover of claims 6 and 10 of the instant application, which comprises 10-20% by mass of one or more aromatic hydrocarbons with 9 carbon atoms or more and 80-90% by mass of one or more solvents other than aprotic polar solvents (alcohols and propylene glycol monomethyl ether, in this case), when the remover comprises 30-60% by weight of propylene glycol monomethyl ether.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Ward et al. (US Patent 4,992, 108) disclose a photoresist stripping composition comprising aromatic hydrocarbon solvents, such as diisopropyl benzene, dipropyl benzene, diethyl benzene, methylethyl benzene, ethylpropyl benzene (column 4, lines 62-67).The most effective composition comprises 80% by weight m-diisopropyl benzene (aromatic hydrocarbon with 12 carbon atoms and having a boiling point of 210°C) (column 5, lines 5-7).

Takagi et al. (US Patent 5,578,420) disclose developing solutions comprising 25-70% by weight of at least one aromatic hydrocarbon having a boiling point of from 150°C to 300°C (component A), such as diethylbenzene, propylbenzene, isopropylbenzene, amylbenzene, amytoluene, diamylbenzene,

amytoluene, Solvesso 100, Solvesso 150, Solvesso 200, Swazol 1000, Swazol 1500, Swazol 1800 (column 4, line 30-column 5, line 13).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANCA EOFF whose telephone number is (571)272-9810. The examiner can normally be reached on Monday-Friday, 6:30 AM-4:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. E./
Examiner, Art Unit 1795

/Cynthia H Kelly/
Supervisory Patent Examiner, Art Unit 1795